

MR1345-727

Serial Number: 10/790,101

Reply to Office Action dated 14 October 2005

REMARKS/ARGUMENTS

This case has been carefully reviewed and analyzed in view of the Office Action dated 14 October 2005. Responsive to that Office Action, Claims 1 and 7 have been amended for further prosecution along with the other pending Claims. With such amendment of Claims, there is a further clarification of the pending Claims' recitations.

In the Office Action, the Examiner objected to the Specification due to minor informalities therein. In response to this objection, the Specification has been amended to correct the informalities therein therefore obviating the Examiner's objection.

In the Office Action, the Examiner objected to Claims 1 and 7 due to informalities therein. In response to this objection, Claims 1 and 7 have been amended to correct the informalities therein therefore obviating the Examiner's objection.

In the Office Action, the Examiner rejected Claims 1-5 and 7-12 under 35 U.S.C. § 103 as being unpatentable over Oguro (U.S. Patent 5,880,585) in view of the Applicant's Admitted Prior Art. Before discussing the prior art relied upon by the Examiner, it is believed beneficial to briefly review the subject Patent Application, as defined in the currently amended Independent Claims. The subject Patent Application is directed to a speedometer gear output structure. The speedometer gear output structure comprises a gear box that is fastened to the

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front fork of a motorcycle. The gear includes a driven gear that is rotatable with the wheels of the motorcycle, an output gear that is meshed with the driven gear, and a receiving chamber corresponding to the output gear. The receiving chamber has an extended circuit board recess portion that extends therefrom. There is an annular magnetic device, with at least one magnetic zone, that is mounted on the gear shaft of the output gear for synchronous rotation with the gear shaft. As more clearly recited, there is a circuit board mounted in the recess portion of the receiving chamber of the gear box in adjacent relation with the annular magnetic device. Therefore, there is direct magnetic coupling of the annular magnetic device to the circuit board. The circuit board further includes a sensor that faces the annular magnetic device and is adapted to output an output signal that is indicative of speed of rotation of the annular magnetic device and the output gear upon running of the motorcycle.

In contradistinction, the Oguro reference is directed to an apparatus including a wheel coupled ring shaped magnet, for detecting rotation of a wheel in a 2-wheeled vehicle. The rotation detector apparatus of the Oguro referenced is provided with a housing, that is mounted to a wheel shaft, having a cylindrical inserting portion for inserting the wheel shaft therein. There is a magnet having rotation support pieces for rotating in synchronism with a wheel mounted to the wheel shaft and a cylindrical portion that is magnetized and into which the inserting portion is inserted. There is a magnetic conversion element for detecting

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a change in magnetic poles magnetized to the cylindrical portion. There is also a first accommodating portion formed at a periphery of the inserting portion for accommodating the magnet and a second accommodating portion for arranging the magnetic conversion element in the proximity of the magnet; all being formed within the housing.

Nowhere does the reference disclose or suggest, "... said receiving chamber having an extended circuit board recess portion extending therefrom ... a circuit board ... in adjacent relation to said annular magnetic device for directly magnetically coupling said annular magnetic device to said circuit board ..." as shown in currently amended Claims 1 and 7. Looking specifically at the Oguro reference, the reference discloses that the circuit board is arranged at the second accommodating portion 1d along the guide groove 1c such that the detecting face 3a of the magnetic conversion element 3 is brought into contact with the inner side face of the magnetic detecting face 1g that is formed at the first accommodating portion 1b of the housing 1. This specifically shows that Oguro does not contemplate having the circuit board in adjacent relation to the annular magnetic device as taught by the Applicant. This is also seen in Fig. 2 of the Oguro reference which shows the magnetic detecting face 1g positioned between the magnet 6 and the sensor of the circuit board 3.

Applicant teaches a circuit board being positioned in adjacent relation to the annular magnetic device. This positioning allows for direct magnetic coupling of

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the annular magnetic device to the circuit board and more specifically, the sensor. Such an orientation allows for more accurate speedometer readings. The device as disclosed by the Oguro reference includes a detecting face that separates the circuit board from the magnet. This type of orientation may inhibit accurate speedometer readings.

The admitted prior art does not overcome the deficiencies of Oguro. The admitted prior art discloses a conventional speedometer comprising a gear box fastened to the front fork of a motorcycle with the gear box comprising a driven gear rotatable with the wheels of the motorcycle and an output gear meshed with the driving gear. However, the admitted prior art does not disclose or suggest, "...said receiving chamber having an extended circuit board recess portion extending therefrom ... a circuit board ... in adjacent relation to said annular magnetic device for directly magnetically coupling said annular magnetic device to said circuit board ...". As mentioned, positioning the circuit board in adjacent relation to the annular magnetic device allows for direct magnetic coupling of the magnetic device to the circuit board therefore producing more accurate speedometer readings; a feature not shown in the admitted prior art.

In the Official Action, the Examiner rejected Claims 6 and 13 under 35 U.S.C. § 103 as being unpatentable over Oguro and the admitted prior art, and further in view of Moyer (U.S. Patent 4,510,447). The Moyer reference is directed to an inspection apparatus for electromagnetically detecting flaws in the wall of a

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a pipe. The reference discloses the interchangeability of Hall ICs and solenoids for use as sensors. Moyer, however, does not disclose or suggest, "...said receiving chamber having an extended circuit board recess portion extending therefrom ... a circuit board ... in adjacent relation to said annular magnetic device for directly magnetically coupling said annular magnetic device to said circuit board ...".

Thus, even if the Oguro reference and the admitted prior art along with Moyer reference are taken alone or in combination, they do not teach, "...said receiving chamber having an extended circuit board recess portion extending therefrom ... a circuit board ... in adjacent relation to said annular magnetic device for directly magnetically coupling said annular magnetic device to said circuit board ...", as is necessary to now amended independent Claims 1 and 7. Additionally, Claims 2-6 and 8-13 are ultimately dependent upon now amended independent Claims 1 and 7, respectively, and show patentable distinction over the Oguro and Moyer references along with the admitted prior art when taken alone or in combination.

The references cited by the Examiner but not used in the rejection are believed to be further remote from the subject Patent Application when patentability considerations are taken into account.

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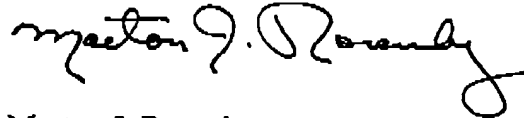
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It is now believed that the subject Patent Application has been placed in condition for allowance and such action is respectfully requested.

Respectfully submitted,

For: ROSENBERG, KLEIN & LEE



Morton J. Rosenberg
Registration #26,049

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Suite 101
3458 Ellicott Center Drive
Ellicott City, MD 21043
(410) 465-6678
Customer No. 04586

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Morton J. Rosenberg
Morton J. Rosenberg